

heat-treating the agglomerated precursor to convert the fatty acid metal salt into the amorphous metal compound and to produce a particle agglomerated product.

10. The method of claim 9 wherein the fatty acid metal salt is used in the form of an aqueous solution.
11. The method of claim 9 wherein the carbonaceous material has an average diameter of 3 to 20  $\mu\text{m}$  and the particle-agglomerated product has an average diameter of 6 to 40  $\mu\text{m}$ .
13. The method of claim 9 wherein the fatty acid metal salt is tin acetate.
14. The method of claim 9 wherein the metal compound includes one or both of  $\text{SnO}_2$  or  $\text{SnO}$ .
15. The method of claim 9 wherein the heat-treating is performed at 250 to 800  $^{\circ}\text{C}$ .

#### REMARKS

Claims 1 to 4, 6 to 11 and 13 to 15, as amended, are pending. Applicant has canceled claims 5 and 12 and amended claims 1 and 9. Attached hereto is a marked-up version of the changes made to the claims by the current amendment, which is captioned "**Version with markings to show changes made.**" The amendments find full support in the original specification and claims. No new matter is presented. In view of the above amendments and following remarks, Applicant respectfully requests favorable reconsideration and a timely indication of allowance.

As an initial matter, Applicant would like to thank the Examiner and his supervisor for taking the time to conduct a telephone interview with the undersigned on April 17, 2002. The comments provided by the Examiner were useful to Applicant in preparing this response.

The Examiner rejected claims 1 to 5, 7 and 8 under 35 U.S.C. § 102(e) as allegedly anticipated by Goda et al. (U.S. Patent No. 6,004,695). Applicant respectfully traverses this rejection.

Independent claim 1, from which the remaining rejected claims depend, recites a negative active material for a rechargeable lithium battery comprising a particle-agglomerated product comprising a

carbonaceous material and an amorphous metal compound, the carbonaceous material being a material into or from which lithium is intercalated or deintercalated, and the amorphous metal compound being able to make an alloy with lithium and including one or more metals selected from the group consisting of Sn, Ag, Fe, Pd, Pb, Al, Si, In, Ni, Co, An and Cd.

Goda is directed to a nonaqueous secondary battery having a negative electrode material consisting mainly of an amorphous oxide containing Sn and Ge. Goda describes that the amorphous composite oxides of the invention are made by mixing oxides and calcining the mixture. The Examiner cites to Example 8 and states that the "compounds are . . . kneaded (to form particle-agglomerated product) in water." (Office action at 1.)

Applicant respectfully disagrees with the Examiner's conclusion. Goda's process does not produce a particle-agglomerated product, as presently claimed. To support this position, Applicant submits herewith a declaration of Kyou-Yoon Sheem under 37 C.F.R. § 1.132. Mr. Sheem, an expert in the field of negative active materials for rechargeable lithium batteries, explains in his declaration that Goda's method produces a slurry, not a particle-agglomerated product. Accordingly, Applicant respectfully submits that Goda does not therefore teach or suggest the presently claimed negative active material and requests that the rejection over Goda be withdrawn.

The Examiner rejected claims 1 to 5, 7 to 12 and 15 under 35 U.S.C. § 103(a) as allegedly unpatentable over Yoneda et al. (U.S. Patent No. 5,591,547). Applicant respectfully traverses this rejection.

As noted above, independent claim 1 recites that the amorphous metal compound includes one or more metals selected from the group consisting of Sn, Ag, Fe, Pd, Pb, Al, Si, In, Ni, Co, An and Cd. Independent claim 9, as amended, similarly recites that the fatty acid metal salt includes one or more metals selected from the group consisting of Sn, Ag, Fe, Pd, Pb, Al, Si, In, Ni, Co, Zn and Cd. As discussed with the Examiner during the telephone interview, Yoneda does not teach or suggest the recited metals. It is the undersigned's understanding that the Examiner agreed during the telephone interview that this amendment would overcome the rejection over Yoneda. Accordingly, Applicant respectfully requests that the rejection under section 103(a) over Yoneda be withdrawn.

In view of the above amendments and remarks, Applicant respectfully submits that pending claims 1 to 4, 6 to 11 and 13 to 15, as amended, are in condition for allowance, and a timely indication

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of allowance is respectfully requested. If there are any remaining issues that can be addressed by telephone, Applicant invites the Examiner to contact the undersigned at the number indicated below.

Respectfully submitted,

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**VERSION WITH MARKINGS TO SHOW CHANGES MADE**

**In the Claims**

Please amend claims 1 and 9 as follows:

1. (Amended) A negative active material for a rechargeable lithium battery comprising a particle-agglomerated product comprising a carbonaceous material and an amorphous metal compound, the carbonaceous material being a material into or from which lithium is intercalated or deintercalated, and the amorphous metal compound being able to make an alloy with lithium and including one or more metals selected from the group consisting of Sn, Ag, Fe, Pd, Pb, Al, Si, In, Ni, Co, An and Cd.

9. A method of preparing a negative active material for a rechargeable lithium battery comprising the steps of:

adding a fatty acid metal salt to a carbonaceous material while the fatty acid metal salt and the carbonaceous material are agglomerated to produce an agglomerated precursor, wherein the fatty acid metal salt includes one or more metals selected from the group consisting of Sn, Ag, Fe, Pd, Pb, Al, Si, In, Ni, Co, Zn and Cd; and

heat-treating the agglomerated precursor to convert the fatty acid metal salt into the amorphous metal compound and to produce a particle agglomerated product.